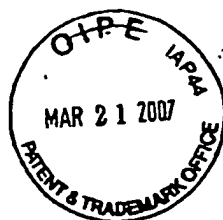


PATENT



Attorney Docket No. NUCL-006/01US
Application No. 10/560,377
(US Nat'l. Stage of PCT/US04/19229)
Page 1

IFW

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of Catherine J. PACHUK *et al.* Confirmation No.: 3823

Application No.: 10/560,377

Group Art Unit: *To Be Assigned*

Int'l. Filing Date: June 10, 2004

Examiner: *To Be Assigned*

For: Conserved HBV and HCV Sequences Useful for Gene Silencing

Commissioner for Patents
U.S. Patent and Trademark Office
Customer Service Window, Mail Stop Amendment
Randolph Building
401 Dulany Street
Alexandria, VA 22314

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INFORMATION DISCLOSURE STATEMENT UNDER 37 C.F.R. §1.97(b)

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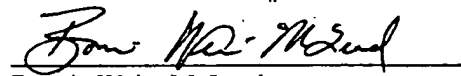
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Dated: March 21, 2007

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Respectfully submitted,
COOLEY GODWARD KRONISH LLP

By:


Bonnie Weiss McLeod
Reg. No. 43,255

INFORMATION DISCLOSURE CITATION <small>(Use several sheets if necessary)</small>  PTO Form 1449				Attorney Docket No. NUCL-006/01US		Application No. 10/560,377 (US Nat'l. Stage of PCT/US04/19229)			
				Applicants: Catherine J. PACHUK <i>et al.</i>				PAGE 1 of 1	
				Int'l. Filing Date: June 10, 2004		Group Art Unit: <i>To Be Assigned</i>			
U.S. PATENT DOCUMENTS									
Initial		Document No.	Date	Name	Class	Sub-Class	Filing Date		
FOREIGN PATENT DOCUMENTS									
		Document No.	Date	Country	Class	Sub-Class	Translation		
/B.P./	1.	WO 03/070918 A2	08/28/2003	WIPO					
OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.)									
/B.P./	2.	Holen et al., "Similar behaviour of single-strand and double-strand siRNAs suggests they act through a common RNAi pathway," Nucl. Acids Res. 31:2401-2407 (2003).							
/B.P./	3.	Macchia, "International Search Report," from PCT/US2004/019229, filed June 10, 2004, 8 pages, European Patent Office, Rijswijk, The Netherlands (mailed September 16, 2005).							
Examiner				Date Considered					
/Bo Peng/				06/18/2009					
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- ☒ Documents 3 and 4 are official communications from foreign patent offices received in Applicants' related SG Application no. 200507781-3.
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Attorney Docket No. NUCL-006/01US
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Dated: Dec. 26, 2006

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Respectfully submitted,
COOLEY GODWARD KRONISH LLP

By:

Bonnie Weiss McLeod
Bonnie Weiss McLeod
Reg. No. 43,255

INFORMATION DISCLOSURE CITATION

Attorney Docket No.
NUCL-006/01US

Application No.
10/560,377 (US Nat'l. Stage of
PCT/US04/19229)

(Use several sheets if necessary)

Applicants: Catherine J. PACHUK *et al.*

PAGE 1 of 1

PTO Form 1449

Int'l. Filing Date: June 10, 2004

Group Art Unit: To Be Assigned

U.S. PATENT DOCUMENTS

Initial		Document No.	Date	Name	Class	Sub-Class	Filing Date
/B.P./	1.	6,518,417	02/11/2003	Sczakiel <i>et al.</i>			

FOREIGN PATENT DOCUMENTS

		Document No.	Date	Country	Class	Sub-Class	Translation
/B.P./	2.	WO 2005/014806	02/17/2005	WIPO			

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.)

/B.P./	3.	Mackenzie, "Written Opinion," from SG 200507781-3, filed June 10, 2004, 6 pages, Australian Patent Office (mailed October 12, 2006).					
	4.	Mackenzie, "Search Report," from SG 200507781-3, filed June 10, 2004, 7 pages, Australian Patent Office (mailed October 12, 2006).					
	5.	Andino, "RNAi puts a lid on virus replication," <i>Nat. Biotechnol</i> 21(6):629-630 (2003).					
	6.	Couzin, "Mini RNA Molecules Shield Mouse Liver From Hepatitis," <i>Science</i> 299:995 (2003).					
	7.	Hamasaki <i>et al.</i> , "Short interfering RNA-directed inhibition of hepatitis B virus replication," <i>FEBS Letters</i> 543:-51-54 (2003).					
	8.	Kapadia <i>et al.</i> , "Interference of hepatitis C virus RNA replication by short interfering RNAs," <i>Proc. Natl. Acad. Sci. USA</i> 100(4):2014-2018 (2003).					
	9.	McCaffrey <i>et al.</i> , "RNA interference in adult mice," <i>Nature</i> 418:38-39 (2002).					
	10.	McCaffrey <i>et al.</i> , "Inhibition of hepatitis B virus in mice by RNA interference," <i>Nat. Biotechnol.</i> 21(6):639-644 (2003).					
	11.	Seo <i>et al.</i> , "Small Interfering RNA-Mediated Inhibition of Hepatitis C Virus Replication in the Human Hepatoma Cell Line Huh-7," <i>J. Virol.</i> 77(1):810-812 (2003).					
	12.	Shlomai and Shaul, "Inhibition of Hepatitis B Virus Expression and Replication by RNA Interference," <i>Hepatology</i> 37:764-770 (2003).					
↓	13.	Wilson <i>et al.</i> , "RNA interference blocks gene expression and RNA synthesis from hepatitis C replicons propagated in human liver cells," <i>Proc. Natl. Acad. Sci. USA</i> 100(5):2783-2788 (2003).					

Examiner

/Bo Peng/

Date Considered

06/18/2009

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		Application Number	10/560,377
		Filing Date	June 19, 2006
		First Named Inventor	Catherine J. Pachuk et al.
		Group Art Unit	
		Examiner Name	
Sheet	1 of 1	Attorney Docket Number	NUCL-006/01US

U.S. PATENT DOCUMENTS					
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Examiner Initials*	Cite No. ¹	Foreign Patent Document Country Code ² Number ³ Kind Code ⁴ (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ²
/B.P./	B1	WO 04/078181 (A1)	09-16-2004	CAPITAL BIOCHIP COMPANY, LTD. & TSINGHUA UNIVERSITY		

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/B.P./	C1	European Search Report based on European Patent Application No. 04776661.3, (January 14, 2008).	

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Page 1

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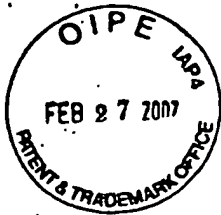
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Dated: Feb. 27, 2007

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/B.P./	3.	Randall <i>et al.</i> , "Clearance of replicating hepatitis C virus replicon RNAs in cell culture by small interfering RNAs," <i>Proc. Natl. Acad. Sci. USA</i> 100(1):235-240 (2003).					
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